THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. An induction sensor comprising a multi layered printed circuit and a sensing element, said printed circuit including a first layer having a primary coil thereon and a second layer having a secondary coil thereon, said primary coil being located in overlapping relation with said secondary coil to induce a responsive current in said secondary coil, said sensing element being electrically connected with said secondary coil to form a closed loop therewith, said sensing element concentrating the responsive current of said secondary coil and rendering the sensing element responsive to changes in inductance and conductivity caused by changes in magnetic or inductive properties of a material adjacent said sensing element.

2. An induction sensor as claimed in claim 1 wherein said sensing element is adjacent an edge of said sensor and includes first and second overlapping elongate conductor portions connected in series and defining a measuring gap therebetween which is sensitive to changes in inductance and capacitance which occur adjacent said edge.

3. An induction sensor as claimed in claim 2 wherein said sensing element is part of said printed circuit.

4. An induction sensor as claimed in claim 3 wherein said first elongate conductor portions is provided on one layer of said printed circuit and said second elongate conductor portions is provided on a different layer of said printed circuit.

5. An induction sensor as claimed in claim 4 wherein said secondary coil is a one turn coil.

6. An induction sensor as claimed in claim 5 wherein said one turn of said secondary coil is of a wide width to generally overlap with said primary coil.

7. An induction sensor as claimed in claim 1 wherein said sensor includes two primary coils located in different layers of said printed circuit.

8. An induction sensor as claimed in claim 7 wherein said primary coils are separated by the layer containing said secondary coil.

9. An induction sensor as claimed in claim 1 wherein said sensing element is defined by external conductors connected to said secondary coil.

10. An induction sensor as claimed in claim 1 in combination with a second induction sensor of the same structure and wherein said sensors are provided in a common printed circuit.

11. A planar induction sensor for sensing magnetic and conductive security structures, said planar induction sensor comprising a multilayered printed circuit having a current transformer and an operating coil, said current transformer comprising a planar spiral-type primary coil provided on one layer of said printed circuit with an associated secondary coil in an adjacent layer of the printed circuit board, said primary coil cooperating with said secondary coil to induce a responsive intensive current in said secondary coil, said secondary coil being connected to the operating coil, said operating coil forming a testing magnetic field responsive to changes in magnetic and conductive properties of security structure when moved past said operating coil.

12. The planar induction sensor as claimed in claim 11 wherein said current transformer and operating coil are situated on the same multilayer printed circuit board and the operating coil is formed by the printed conductors on of said multilayer printed circuit board.

13. The planar induction sensor as claimed in claim 11 wherein said current transformer contains one primary coil and one secondary coil situated on adjacent layers of the multilayer printed board.

14. The planar induction sensor as claimed in claim 11 wherein said current transformer comprises two series primary coils in different layers of said circuit board separated by a layer containing said secondary coil of current transformer.

15. The planar induction sensor as claimed in claim 11 wherein said current transformer comprises two connected in parallel primary coils in different layers of said printed circuit separated by the layer containing said secondary.

16. The planar induction sensor as claimed in claim 11 wherein said current transformer has a primary coil with a constant width of turns and constant distance between the turns.

17. The planar induction sensor as claimed in claim 11 wherein said current transformer has a primary coil with a constant width of turns and a variable distance between the turns, said distance increasing with increasing of the length of said turns.

18. The planar induction sensor as claimed in claim 11 wherein said current transformer has a primary coil with a constant distance between turns and a variable width of the turns, said width increasing with increasing of the length of said turns.

19. The planar induction sensor as claimed in claim 11 wherein said operating coil contains two or more wires with different directions of currents.

20. The planar induction sensor as claimed in claim 11 wherein one point of said operating coil is connected to one end of the primary coil of the current transformer.

21. The planar induction sensor as claimed in claim 11 wherein said induction sensor contains several current transformers, each being connected to an individual operating coil.

22. The planar induction sensor as claimed in claim 1 including associated with planar induction sensor electronic processing circuitry mounted on the multilayered printed circuit board of said planar induction sensor.

23. The planar induction sensor as claimed in claim 1 wherein several planar induction sensors with associated electronic circuits are incorporated on different places of the one printed circuit board.

24. A method of taking into account the dependence of planar induction sensors signal on the distance between the planar induction sensor and the tested document, comprising: a planar induction sensors

arrangement in which two planar induction sensors, each with individual associated electronic processing circuitry, said electronic processing circuitry being sensitive to any changes in associated induction sensor inductance, are placed on the opposite sides of the validators channel substantially opposite one another; and microcontroller programmed to calculate correction coefficient for multiplication of the signal from the electronic processing circuitry, associated with the first planar induction sensor using the magnitude of the signal from electronic processing circuitry, associated with the second induction sensor.

25. The method according to claim 24 wherein associated with each sensor electronic processing circuits operate with different respective frequencies.

26. The method according to claim 24 wherein associated with each sensor electronic circuits with the equal frequencies and constant phase shift.

27. A banknote validator comprising a banknote evaluation channel, a transport arrangement for moving a banknote through said evaluation channel, at least one induction sensor placed in one side of said evaluation channel for sensing changes of the magnetic and inductive properties of a banknote as it is moved past said at least one induction sensor; said at least one induction sensor comprising a multi layered printed circuit and a sensing element, said printed circuit including a first layer having a primary coil thereon and a second layer having a secondary coil thereon, said primary coil being located in overlapping relation with said secondary coil to induce a responsive current in said secondary coil, said sensing element being electrically connected with said secondary coil to form a closed loop therewith, said

sensing element concentrating the responsive current of said secondary coil and rendering the sensing element responsive to changes in inductance and conductivity caused by changes in magnetic or inductive properties of a banknote as it is moved past said sensing element.

28. A banknote validator as claimed in claim 27 having at least two induction sensors with one induction sensor located on one side of the banknote evaluation channel and said second induction sensor located on the opposite side of the evaluation channel.

29. A banknote validator as claimed in claim 28 wherein each of said induction sensors have separate electronic circuitry for processing the signals thereof.

30. A planar induction sensor for sensing magnetic and conductive security structures, said planar induction sensor comprising planar current transformers manufactured by multilayer printed circuit board technology and operating coils, said current transformers comprising planar spiral- type primary coils associated with a planar secondary coils in the nearest layers of the printed circuit board, said primary coils induce a responsive intensive current in said secondary coils, said secondary coils being connected to the operating coils, said operating coils forming a testing magnetic field on the magnetic and conductive security structures.

31. The planar induction sensor as claimed in claim 30 wherein said current transformers are manufactured by multilayer printed circuit board technology and said operating coils are formed by external wires.

32. The planar induction sensor as claimed in claim 30 wherein said current transformers and operating

coils are situated on the same multilayer printed circuit board and the operating coils are formed by the printed wires of said multilayer printed circuit board.

33. The planar induction sensor as claimed in claim 30 wherein said current transformer contains one primary coil and one secondary coil being situated in nearest layers of the multilayer printed board.

34. The planar induction sensor as claimed in claim 30 wherein said current transformer comprises two series primary coils in different layers, separated by the layers in which the secondary coil of current transformer are located.

35. The planar induction sensor as claimed in claim 30 wherein said current transformer comprises two conducted in parallel primary coils in different layers, separated by the layers in which the secondary coils of the current transformer are situated.

36. The planar induction sensor as claimed in claim 30 wherein said current transformer comprises more than two conducted in serial primary coils in different layers, separated by the layers in which the secondary coils of the current transformer are situated.

37. The planar induction sensor as claimed in claim 1 wherein said current transformer comprises more then two conducted in serial-parallel primary coils in different layers, separated by the layers in which the secondary coils of the current transformer are situated.

37. The planar induction sensor as claimed in claim 30 wherein said current transformer comprises more than

two conducted in serial-parallel primary coils in different layers, separated by the layers in which the secondary coils of the current transformer are situated.

38. The planar induction sensor as claimed in claim 30 wherein said current transformer comprises two or more primary coils with individual exit pins.

39. The planar induction sensor as claimed in claim 30 wherein said current transformer comprises one-turn secondary coil in one layer of said printed circuit board.

40. The planar induction sensor as claimed in claim 30 wherein said current transformer comprises two or more turns of secondary coil in one layer of said printed circuit board.

41. The planar induction sensor as claimed in claim 30 wherein said current transformer comprises two conducted in serial secondary coils in different layers, separated by the layers in which the primary coils of the current transformer are situated.

42. The planar induction sensor as claimed in claim 30 wherein said current transformer comprises two conducted in parallel secondary coils in different layers, separated by the layers in which the primary coils of the current transformer are situated.

43. The planar induction sensor as claimed in claim 30 wherein said current transformer comprises more than two secondary coils in the different layers conducted in serial-parallel and separated by the layers in which the primary coils of the current transformer are situated.

44. The planar induction sensor as claimed in claim 30 wherein said current transformer has a primary coil with a constant width of turns and constant distance between the turns.

45. The planar induction sensor as claimed in claim 30 wherein said current transformer has a primary coil with a constant width of turns and a variable distance between the turns, said distance increasing as the length of said turns increases.

46. The planar induction sensor as claimed in claim 30 wherein said current transformer has a primary coil with a constant distance between turns and a variable width of the turns, said width increasing as the length of said turns increases.

47. The planar induction sensor as claimed in claim 30 wherein said operating coil contains one wire.

48. The planar induction sensor as claimed in claim 30 wherein said operating coil contains several wires where currents flow in the same direction.

49. The planar induction sensor as claimed in claim 30 wherein said operating coil contains two or more wires with different directions of currents.

50. The planar induction sensor as claimed in claim 30 wherein one point of said operating coil is connected to one end of the primary coil of the current transformer.

51. The planar induction sensor as claimed in claim 30 wherein one point of said operating coil is connected to one end of the primary coil of the current transformer through the capacitor.

52. The planar induction sensor as claimed in claim 30 wherein said induction sensor contains several current transformers, each being connected to an individual operating coil.

53. The planar induction sensor as claimed in claim 30 wherein associated with planar induction sensor electronic processing circuitry is mounted on the multilayer printed circuit board of said planar induction sensor.

54. The planar induction sensor as claimed in claim 30 wherein several planar induction sensors are incorporated in different locations on one printed circuit board.

55. The planar induction sensor as claimed in claim 30 wherein several planar induction sensors with associated electronic circuits are incorporated on one printed circuit board.

56. A method of taking into account the dependence of planar induction sensors signal on the distance between the planar induction sensor and the tested document, comprising: a planar induction sensors arrangement in which two planar induction sensors, each with individual associated electronic processing circuitry, said electronic processing circuitry being sensitive to any changes in associated induction sensor inductance, are placed on the opposite sides of the

validators channel substantially opposite one another; and microcontroller programmed to calculate correction coefficient for multiplication of the signal from the electronic processing circuitry, associated with the first planar induction sensor using the magnitude of the signal from electronic processing circurity, associated with the second induction sensor.

57. The method according to claim 56 wherein associated with each sensor electronic processing circuits operate with different respective frequencies.

58. The method according to claim 56 wherein associated with each sensor electronic circuits with the equal frequencies and constant phase shift.